FERNALD CITIZENS ADVISORY BOARD

FCAB UPDATE

Week of September 9, 2002

(Last update was August 6, 2002)

MEETING SCHEDULE

Fernald Citizens Advisory Board Annual Retreat **Hamiltonian Hotel**
Saturday, September 28, 2002 8:30 a.m. – 2:00 pm

ATTACHMENTS

- Retreat Agenda
- Articles & News Clippings

NEWS and ANNOUNCEMENTS

This year's retreat will be held at the Hamiltonian Hotel at One Riverfront Plaza in Hamilton, Ohio. You may reach the hotel at 513-896-6200 or 800-522-5570.

FOR FURTHER INFORMATION

Please contact Doug Sarno or David Bidwell at The Perspectives Group
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FCAB Annual Retreat
Hamiltonian Hotel
Saturday, September 28

Agenda

8:30 a.m.	Breakfast
9:00 a.m.	General Remarks and Updates
9:30 a.m.	Board Self Evaluation
11:00 a.m.	Transitioning to "Closure CAB"
12:00 p.m.	Lunch
12:30 p.m.	Goals and Activities for the Next Year
1:30 p.m.	Board Structure, Membership, and Leadership
2:00 p.m.	Adjourn Meeting

U.S. cuts off study of radioactive site

This story was published in A-section on Sunday, August 4, 2002.

By Bill Lambrecht
Post-Dispatch Washington Bureau

WASHINGTON - To the displeasure of Missouri officials, the Department of Energy is terminating an arrangement with the National Academy of Sciences to study long-term management of radioactive waste sites like Weldon Spring.

The decision to cut off a study at least two years early also is troubling to the impaneled scientists and could fuel efforts in Congress to demand more accountability for the billions being spent to clean up nuclear waste.

Kai N. Lee, chairman of the scientific panel studying government management of waste sites, said he was told by Energy Department officials last month that they no longer will sponsor the effort.

"They said to wrap up our work," Lee, a professor at Williams College in Massachusetts, said in an interview. "We aren't clear on what this means, but I don't think we will be proceeding as we had anticipated."

Academy officials said it is unusual for a government agency to suddenly change its mind about the course of a study.

The 14-member panel appointed by the academy's National Research Council has been examining thorny issues related to management of radioactive waste sites when they are cleaned up to the extent possible but pose dangers long into the future. Many of the sites, the panel has reported, will pose "risk to humans and the environment for tens or even hundreds of thousands of years."

About 100 sites around the country, among them Weldon Spring, fall into that category.

The St. Charles County site has been the focus of a nearly $1 billion project that included burial of 1.5 million cubic yards of radioactive materials and chemicals in a sealed tomb seven stories high.

The wastes were left over from bomb making in the 1940s and processing uranium for weapons in the 1950s.

The scientists began studying the cleanup there and at similar sites in the mid-1990s and making recommendations to the Energy Department. The study began after members of Congress demanded to know if the $6 billion they were appropriating annually for cleanups was well-spent.

Two years ago under a different chairman, the committee criticized the Energy Department for taking what it called "a restrained and piecemeal" approach to long-term stewardship issues such as monitoring. The newly constituted committee was preparing to begin the second phase of that study, looking at a host of issues that included cleanup technologies and long-term monitoring of sites.

Committee member John Applegate, a law professor at Indiana University, said the panel had hoped to make recommendations on issues that the Energy Department will be confronting for years.

"I was looking forward very much to continuing because I think these are important issues for the department, and I hope that this doesn't mean they're trying to ignore them. That would be a terrible mistake," he said.

Spokesman Joe Davis said the Energy Department looked forward to working with the National Academy of Sciences on other issues but felt that it already had implemented important recommendations from the committee.

"Some folks out there are saying DOE is just cutting them off, and that's not true," Davis said, adding that the committee would have between three and six months to finish a final report.

Asked why the arrangement had been terminated, he declined to be specific.

Missourians are troubledThe decision rankled Missouri's Department of Natural Resources, which believes that the Energy Department is unwilling to accept further criticism of its long-term planning for waste sites. The Natural Resources agency has been carrying on sometimes heated discussions with the federal agency over what the Missourians consider shortcomings in the Energy Department's long-term planning for Weldon Spring.

The Energy Department is in the last stages of finishing its work at Weldon Spring.

On Monday, assistant secretary Jessie Roberson and other Energy Department officials are scheduled to travel there for the opening of an interpretive center that presents the history of the site and its 16-year cleanup in photos. The gathering is sponsored by the Weldon Spring Citizens commission.

The event was announced by the Energy Department last week with a news release titled, "DOE completes Environmental Cleanup at Weldon Spring Site."

But the Natural Resources agency is pointedly challenging the assertion that the cleanup is finished.

The state had invited the National Academy of Sciences panel to tour the Weldon Spring site. Lee, the panel chairman, observed that members won't be traveling to Missouri or anywhere else now that the Energy Department is ending its work.

Ron Kucera, assistant director for policy at the Natural Resources agency, said that he was troubled by the Energy Department decision.

"We had hoped that these scientists would visit here and express concerns about the significant ground-water problem at the site and the need for better long-term stewardship," he said.

The concerns have even reached the office of Gov. Bob Holden, who is calling for a continued push for ongoing monitoring.

"Although I am pleased by the progress at the Weldon Spring site thus far, I have deep concerns about the long-term cleanup and stewardship issues, and am committed to working closely with the local community, the Missouri Congressional delegation, and DOE to ensure that they are resolved," Holden said. "The job is not done until we have a plan that makes sense for everyone for the long-term care of the site. This is no time to stop real progress."

"We're real proud"Missouri officials also complain that the Energy Department has refused to adequately address ground-water problems at the site and to spell out a funding mechanism so that there will be sufficient monitoring of Weldon Spring in the coming years.

The Missourians voiced their concerns in recent letters to Sen. Jean Carnahan, D-Mo.

Missouri's Natural Resources agency pronounced as "very misleading, internally contradictory and largely inaccurate" an Energy Department briefing to Congress in June that described progress at Weldon Spring.

"The DOE has not been adequately responsive to (Missouri's) concerns regarding the need for effective long-term stewardship," the Missouri agency asserted, adding that the government is trying to renege on an agreement to compensate the state for its work at Weldon Spring.

Pam Thompson, the project manager for the Weldon Spring cleanup, asserted that the fears of Missouri officials are misplaced and that the Energy Department is still working on ways to control polluted water.

"We're real proud of what we've done here, and when we finish the field work, we'll still be here," she said, adding that her agency will be keeping a small staff at Weldon Spring temporarily while transferring control of the site to another office in Grand Junction, Colo.

Reporter Bill Lambrecht:\ E-mail: blambrecht@post-dispatch.com\ Phone: 202-298-6880

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August 16, 2002

Next in saga over planned dumpsite: Debating list of 293 unresolved issues

By Benjamin Grove
<grove@lasvegassun.com>
LAS VEGAS SUN

The Categories

The Energy Department has agreed to provide the Nuclear Regulatory Commission with volumes of additional data on 293 topics related to the Yucca Mountain project. The topics fall into nine categories:

* Likelihood and consequences of a volcano
* Evaluation of an earthquake
* Long-term changes in the repository's environment
* Predictions about waste containers, and how much waste might leak from containers
* How heat and moisture interact inside the repository
* The design of the repository
* Groundwater flow under Yucca
* How radioactive particles might be carried out of the repository
* Total system performance -- how well the repository works as a waste isolating system

Source: Nuclear Regulatory Commission

WASHINGTON -- The Nuclear Regulatory Commission's list of 293 "unresolved" scientific issues at Yucca Mountain often has been the center of debate about the project.

To a layman, the list is virtually undecipherable, written in a secret language of technical jargon.

To Nevada officials, the list is prose, a beautifully itemized catalog of gaps in Energy Department research to make Yucca the world's first high-level nuclear waste burial ground.

To Energy officials, the list is a guide that will help them fulfill NRC requirements and win its approval.

During the next 17 months, the list -- a compilation of requests from the commission for more information -- is expected to play a starring role in the ongoing saga of Yucca as the

Energy Department scrambles to submit an application for a license to construct the dump.

Department officials view the 293 data requests as a collection of mere loose ends, not "show-stoppers."

But Yucca critics say many will be difficult to answer, ultimately casting even more doubt on the project they say has been plagued by missing and flawed research.

"The DOE has not done good scientific work," said Arjun Makhijani, an engineer who is the Institute for Energy and Environmental Research president and a longtime Yucca critic. "They have spent a lot of money, and people tend to confuse the two. The $7 billion has not produced a body of scientific evidence that supports Yucca Mountain."

The science

The Energy Department fought for years to earn its final victory in Congress, which came when the Senate approved Yucca in July. Now the department faces an even more formidable hurdle than layman lawmakers: an army of NRC scientists and engineers.

Nevada officials welcome the venue change, saying they have always had a better chance of killing the project in a scientific or legal arena, as opposed to a political one.

"There is no question in my mind that on a level playing field, under a strict and impartial technical review, the site doesn't stand a chance," Nevada Nuclear Projects Agency Director Bob Loux said.

Still, state officials are skeptical of the commission, which is closely tied to the pro-Yucca industry it regulates and not likely to be a "neutral arbiter of fact," Loux said.

Many observers disagree, saying the Rockville, Md.-based NRC is staffed by some of the nation's leading scientists who are committed to an impartial Yucca review.

But observers also acknowledge that the five-member panel perched atop the agency is under tremendous political pressure to approve the site.

"It's way too early to tell," if the NRC could ever reject Yucca based on science, said Allison Macfarlane, director of a Yucca research project at the Massachusetts Institute of Technology.

Energy Department officials are confident Yucca will hold up under NRC scrutiny. They believe the site is backed by impressive scientific data, with more on the way.

Scientists considered every future scenario at Yucca -- even ice ages and flooding and devastating earthquakes, department officials say. None of the research suggests that

Yucca would fail to meet Environmental Protection Agency standards within the next 10,000 years, they say.

"Some of the world's best scientists examined every aspect of (Yucca Mountain)," Energy Secretary Spencer Abraham told lawmakers in May. He told President Bush that he never would have recommended Yucca if it was dangerous to the public, "including those Americans living in the immediate vicinity, now and into the future."

But critics say the 293 issues prove the jury is still out.

Makhijani strongly believes in the concept of a geologic waste repository, but argues research proves Yucca is a bad site.

"We need someone to stand up and say, 'The emperor has pretty skimpy clothes,' " he said.

The list

The list was cobbled together last year as the Energy Department was finalizing many of its studies. The department spent 20 years compiling thousands of studies and reports about the desert ridge's hydrology, geology and history.

But department officials still didn't know if they had amassed enough data for the NRC to consider their license application. They needed to know if they were close.

So NRC staffers drew up an itemized accounting of notable "gaps" in the department's research.

What emerged in September was a 37-page document that listed the 293 gaps, often called "agreements." Both agencies agreed the department would have to fork over more data on each issue -- in some cases, a lot more -- before the NRC would consider it complete.

If the department coughs up all the necessary information, only then will the NRC consider "docketing" the application and launching an in-depth review.

In the end, the NRC -- not the Energy Department -- will "resolve" whether the department's data supports its case that Yucca is a safe site to permanently bury the nation's most radioactive waste, according to NRC high-level waste chief Janet Schlueter.

The issues

The 293 data requests vary widely. For example, the NRC wants supporting data on how the Energy Department approached evaluating seismic risks; additional documents on metal waste container corrosion tests; and more information on "thermohydrologic flow" -- how heat affects moisture in the tunnels.

Officials sorted the 293 points into nine groups called "key technical issues," which insiders call KTIs. For example, one group consists of 23 requests for more information about how the design of the underground repository will affect heat and moisture inside it. Placing heat-emitting waste containers closer together would make the repository's temperature higher. The Energy Department has not yet chosen a "hot" or "cold" design.

The groups closely mirror many issues that Nevada officials for years have said made Yucca a bad place to bury waste.

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Hydrology: "The best way to think of it is to follow the water," Macfarlane said. She supports the concept of a geologic waste dump, but has criticized much of the Energy Department's research, including studies of whether water flow at Yucca may one day carry radioactive particles outside the mountain.

"It's unknown how much rain might fall in the future and unclear how the water moves through the repository now," she said.

Rain may seep through the mountain's cracks faster than expected, critics say. That means water could enter the tunnels, even drip on the metal containers, corroding even the most high-tech metals over time.

"We don't know what those travel times are with any precision. This is an area of concern for the NRC. They would like to understand it better," said Debra Knopman, a hydrology and systems analysis expert and a member of the 11-person Nuclear Waste Technical Review Board, an independent panel created by Congress to watch Energy Department studies.

The department disagrees. Less than a half an inch of rain a year seeps beneath Yucca's surface, Abraham told Congress. "Our studies indicate that the vast majority of water samples taken from (inside) the mountain are thousands of years old."

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Volcanoes: Even Nevada consultants say it's unlikely that ancient volcanoes near Yucca could erupt during the next 10,000 years. But the department should know a lot more about how likely -- and how damaging -- "igneous activity" could be before they build a repository, Nevada officials say. A study published last month by a team of Dutch, English and U.S. scientists said molten rock could blast into the repository at 600 mph and fill it within hours if dormant volcanoes near Yucca awoke.

Department officials say the chance of an eruption is one in 70 million each year for the next 10,000 years. Nevada officials don't trust that statistic.

"The probability of an eruption is pretty low," said Eugene Smith, a University of Nevada, Las Vegas professor who is leading a state-contracted study of eruption probability rates. "But I don't think (the department) has calculated the probability of volcanic activity to the satisfaction of the NRC."

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Waste containers: Of the 293 points, 58 were requests for more information about the giant metal casks that department officials say will encapsulate waste for 10,000 years.

Nevada officials say the containers may be the biggest flaw in the entire project, in part because the department plans to construct the containers out of a newly developed nickel-based alloy often called Alloy-22.

Not enough is known about the metal to form any "reasonable assurance" that it won't rust or otherwise corrode, critics say.

"They are fighting Mother Nature for hundreds of thousands of years with a metal that has just been discovered," Makhijani said.

Part of Nevada's legal effort to kill Yucca depends on the argument that the Energy Department is relying too heavily on Alloy-22 containers to isolate waste -- and not primarily on the mountain itself, which federal law intended, state officials say.

The Energy Department plans to rely on mere "first-of-a-kind, man-made contrivances," Attorney General Frankie Sue Del Papa argued in a petition filed last month at the NRC, urging that it create stricter Yucca licensing rules.

Alloy-22 is simply unproven over time, and scientists don't have enough data to make accurate performance predictions, Joe Egan, one of the state's lawyers, said.

"It's almost as if they are back to square one," Egan said. "You're back to saying, 'We've got to have a container that lasts 10,000 years, now what are we going to make it out of?' "

Department engineers sharply disagree that Alloy-22 would corrode. They have been conducting three sets of tests on the metal, looking for signs of cracking or corrosion. The primary test dates back five years in which "hundreds, if not thousands" of 3- to 4-inch square Alloy-22 samples have been submerged in water with varying chemical compositions at Lawrence Livermore National Laboratory in California, Energy Department engineer Paige Russell said.

The bottom line: The tests show "extremely low rates" of general corrosion that suggest an Alloy-22 waste container would not leak within 10,000 years, Russell said.

Department and nuclear industry officials also assert that their scientific evidence proves they rely on Yucca geology and the waste containers working "in concert," as Abraham put it.

"This project does not depend on a miracle metal," added Rod McCullum, a senior project manager at the Nuclear Energy Institute, the nuclear industry's top trade group.

The deadline

It's not clear whether the department can gather all the necessary data to satisfy the NRC by December 2004.

The General Accounting Office is skeptical. The investigative arm of Congress concluded that the department needed until 2006 to adequately finish its studies, based largely on information provided by project contractor, Bechtel SAIC.

But Bechtel promptly rejected a draft version of the GAO report, which Abraham said was "fatally flawed."

Department officials are optimistic. They laid out a timeline for turning over all the research by December 2004. The department already has complied with 52 points -- leaving 241.

At a recent meeting, Energy Department Yucca chief Margaret Chu told a National Academy of Sciences panel that resolving every one by the end of 2004 was among her highest priorities, but acknowledged, "There are 160 KTI that we haven't even started addressing."

George Hornberger, head of the NRC's Advisory Committee on Nuclear Waste, which advises the commissioners on Yucca issues, said the department seems to be on track.

"As the committee has followed the processes, we certainly haven't seen any huge roadblocks that cause us to say, 'Wow, this is really stupid,' " Hornberger said.

But the panel also has been critical of the project's science. In September it issued a sharply worded report about the department's "total system performance assessment," essentially the department's analysis of whether Yucca works.

The report said the department "relies on modeling assumptions that mask a realistic assessment of risk." And it said department "computations and analyses are assumption-based, not evidence-supported."

That opinion hasn't changed much in the last year, but it certainly could by 2004, Hornberger said.

Observers expect the 293 issues to be the beginning, not the end, of NRC requests for information. It is notorious for poring over every detail, industry insiders say.

"Just satisfying the NRC's thirst for information is not easy -- and it shouldn't be," McCullum said.

In the days when the NRC was still licensing nuclear power plants, it used to throw "books" of key technical questions at licensees, said Robert Bernero, who spent six years overseeing plant safety at the agency.

"Of course the NRC will find more issues that need to be resolved (at Yucca)," said Bernero, a consultant and member of the National Academy's Yucca panel. "This is just a list of initial issues."

Decades more work

Even if the Energy Department submits all the materials necessary to satisfy the NRC by December 2004, reviews will continue for decades after Yucca Mountain opens, advocates and opponents say.

The department plans to carry out a "performance confirmation program" in which scientists will carefully monitor the mountain for signs of flaws. That will go on until Yucca closes -- decades, even a century or two.

In addition, many advocates and opponents say in-depth scientific research -- beyond routine monitoring -- should continue at Yucca for generations. The extent of the research has not been defined and likely will depend on how much Congress is willing to fund, observers say.

"The vast majority of the board would support a research and development program that would extend well beyond the opening of the repository, considering the significance of the uncertainties that exist," said Bill Barnard, staff director of the Nuclear Waste Technical Review Board, Congress' Yucca watchdog.

As part of its license application, the department must outline its "performance confirmation plan." It's likely those plans will include studies on the waste containers, including possible full-scale tests, which have never been conducted, said Tim McCartin, a senior NRC adviser for performance assessment.

Among other benefits, those long-term tests could be vital to proving whether Alloy-22 is corrosion-proof, said Alberto Sagues, a University of South Florida professor and metals corrosion expert and former member of the Nuclear Waste Technical Review Board. So far, the metal's longevity is uncertain, he said.

"The question is, as time progresses, will the department be doing these studies with the intensity that the problem demands?" Sagues said. "We are dealing with such an

unprecedented performance period that you can't say, 'We've solved everything and now we're going to forget about it.' "

Of course, years after Yucca opens it will be difficult to cancel the project even if ongoing studies uncover serious flaws, most observers agree. But continued study will allow scientists to make necessary corrections.

"You don't have to pin every detail down," McCullum said. "That's a tactic used by the (Yucca) opponents to try to nail down every answer so that they have a target. If you have to make adjustments, you make adjustments."

But Yucca critics fear the department's promises of ongoing study may be designed to merely make a bad project more palatable to a doubting public.

"When I see the DOE promising a bunch more studies, I think: 'Why did they make the (site recommendation) decision already? If they have already decided (Yucca) is OK, then why are they planning this research?' " Macfarlane said.

And Nevada officials say they don't want promises of a future science experiment; they want all the answers before trucks and trains begin hauling waste from all over America to the desert ridge 90 miles northwest of Las Vegas.

"It's very bizarre," Loux said. "You would think that with a first-of-its-kind project, they would want to have the whole thing nailed down. It's like a Kafka novel."

For now, Energy Department officials are focused on meeting all of the NRC's 293 demands. They expect that by the end of 2004, Congress' Nuclear Waste Technical Review Board will offer a more optimistic opinion of the science than one issued in January. In a widely discussed finding then, the board concluded that the scientific evidence supporting Yucca Mountain was "weak to moderate."

It's likely that assessment will improve by December 2004, Barnard said. But it's not a guarantee.

"Sometimes," Barnard said. "more information creates more uncertainty."

Lawmakers welcome contract for uranium conversion plants in Ohio, Kentucky

By Malia Rulon, Associated Press
Friday, August 30, 2002

WASHINGTON — The Energy Department awarded a $558 million contract Thursday to build a pair of plants that will convert vast amounts of uranium waste into a safer form, ending years of speculation over whether it would build one or two facilities.

"This has been a tough battle, but today we can finally say that we're on our way to cleaning up the hazardous waste," said Sen. Mitch McConnell, R-Ky.

Uranium Disposition Services, a consortium of energy companies based in Oak Ridge, Tenn., will build the plants in Ohio and Kentucky and operate them for five years, the Energy Department announced. Five companies had bid for the contract, which runs until 2010.

McConnell and others had argued that legislation passed in 1998 required the government to build two facilities — one at the Portsmouth Gaseous Diffusion plant in Piketon, Ohio, and one at its sister plant in Paducah, Ky. The Bush administration maintained the language wasn't mandatory and that it was inclined to build one facility to save money.

An antiterrorism spending bill passed by Congress last month again required the government to build two facilities.

"It's unfortunate that it literally took a second act of Congress to get it done, but I'm happy that it's finally happening," said Democratic Rep. Ted Strickland, whose southern Ohio district includes the Ohio plant.

Hundreds of workers at the Piketon plant lost their jobs last year when USEC Inc. stopped uranium enrichment operations there, scaling back to just one enrichment facility in Paducah.

The new legislation required the Energy Department to award a contract for the project one month after the president signed the spending bill. It also required construction of the facilities to begin by July 31, 2004.

About 60,000 cylinders of depleted uranium are stored at Energy Department facilities in Paducah, Piketon, and Oak Ridge. The conversion plants will convert it into a more stable form for either long-term storage, use or disposal.

The hazardous waste is a byproduct of the uranium enrichment process that the government used to manufacture nuclear weapons. Only the Paducah facility now enriches uranium and it does so for commercial purposes.

Lawmakers say they do not have a firm figure on how much it would cost to build the two facilities but one estimate shows it could cost $400 million. The plants are expected to operate for up to 25 years.

Uranium Disposition Services is made up of Framatome ANP, Inc., Duratek Federal Services, Inc., and Burns and Roe Enterprises, Inc.

From the Idaho Statesman:

S. Carolina waits for ruling in Idaho nuclear case

An environmental group says the government should not seal 49 tanks containing 35 million gallons of high-level radioactive waste at the Savannah River Site near Columbia, S.C., until an Idaho lawsuit is heard.

SRS has decided the huge underground tanks should be filled with concrete and stay at the site indefinitely. Two of the sites' 51 tanks already are filled with concrete and sealed. SRS chose that method after completing an environmental impact study of alternative methods.

Natural Resources Defense Council filed a lawsuit in U.S. District Court in Idaho charging that the closure method, which the U.S. Energy Department plans to also use in Washington and Idaho, violates the federal Nuclear Waste Policy Act.

That act says that waste has to be converted into glass logs and buried in deep caverns, possibly at Yucca Mountain, Nev.

South Carolina Gov. Jim Hodges, who has fought plans to ship weapons-grade surplus plutonium to SRS, is wary of a rush to close the tanks and wants site officials to provide more information about how they reached their decision.

Plans to fill the tanks with concrete leaves the high-level waste residue in the tanks. The Natural Resources Defense Council says that is an arbitrary and illegal reclassification of the waste intended to cut costs and speed tank closure.

In Idaho, the Snake River Alliance has argued that the agency's attempt to reclassify high-level radioactive waste as "incidental to reprocessing" would use an illegally low standard for cleaning up some 100 million gallons of the nation's most highly radioactive waste.

The council wants the federal court to issue an injunction against the Energy Department, to prevent any further tank closures until the case has been tried. A federal judge has not issued an injunction.

Edition Date: 09-04-2002

Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated to the Public by the Department of Energy

I. Background.

Section 515, Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106-554), directed the Office of Management and Budget (OMB) to issue government-wide guidelines that "provide policy and procedural guidance to Federal Agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by Federal Agencies." The OMB guidelines, published in the Federal Register on February 22, 2002 (67 FR 8452), require agencies to issue by October 1, 2002, their own implementing guidelines that include administrative mechanisms allowing members of the public to seek and obtain correction of information disseminated by the agency that does not comply with the agency guidelines.

The Department of Energy (DOE) Information Quality Guidelines, issued by the Department's Chief Information Officer (CIO) pursuant to OMB's Guidelines, are intended to provide guidance to Departmental Elements (*i.e.*, major DOE offices) on maximizing the quality, objectivity, utility, and integrity of information, including statistical information, disseminated to the public.

The DOE Guidelines also establish mechanisms for members of the public to seek and obtain administrative correction of disseminated information that does not comply with the quality requirements of these Guidelines. Finally, the Guidelines explain how the CIO will comply with OMB's annual reporting requirement concerning complaints from members of the public.

The DOE Information Quality Guidelines will become effective on October 1, 2002.

II. Introduction.

The CIO has designed these Guidelines to apply to a wide variety of DOE information dissemination activities that may range in importance and scope. They are intended to be sufficiently generic to fit all media, printed, electronic, or other forms. The CIO has sought to avoid the problems that would be inherent in developing detailed, prescriptive, "one-size-fits-all" DOE-wide guidelines that would artificially require different types of dissemination activities to be treated in the same manner.

The Guidelines are designed so that DOE Elements can apply them in a common sense and workable manner. It is important that these guidelines not impose unnecessary administrative burdens that would inhibit DOE Elements

from continuing to take advantage of the Internet and other technologies to disseminate information to the public. In this regard, DOE Elements may incorporate the standards and procedures required by these guidelines into their existing information resources management and administrative practices rather than create new and potentially duplicative or ontradictory processes. DOE Elements may rely on their implementation of the computer security provisions of the Paperwork Reduction Act (PRA) of 1995, 44 U.S.C. 3501 *et seq.*, to establish appropriate security safeguards for ensuring the integrity of the information that they disseminate.

III. DOE Information Quality Guidelines.

A. What definitions apply to these Guidelines?

1. DOE Element means a major DOE office headed by an official whose position is subject to Senate confirmation or an office which directly reports to the Secretary, Deputy Secretary, or either of the DOE Under Secretaries.

2. Dissemination means DOE Element initiated or sponsored distribution of information to the public.

3. Influential means, when used in the context of scientific, financial, or statistical information, information (1) that is subject to embargo until the date of its dissemination by the Department or DOE Element disseminating the information because of potential market effects; (2) that is the basis for a DOE action that may result in an annual effect on the economy of $100 million or more; or (3) that is designated by a DOE Element as "influential."

4. Information means any communication or representation of knowledge such as facts or data, in any medium or form, including textual, numerical, graphic, cartographic, narrative, or audiovisual forms, including information that a DOE Element disseminates from a web page, but excluding the provision of hyperlinks to information that others disseminate.

5. Information dissemination product means any book, paper, map, machine-readable material, audiovisual production, or other documentary material, regardless of physical form or characteristic, a DOE Element disseminates to the public, including any electronic document, CD-ROM, or web page.

6. Integrity means the information has been secured and protected from unauthorized access or revision, to ensure that the information is not compromised through corruption or falsification.

7. Objectivity means the information is presented in an accurate, clear, complete, and unbiased manner and the substance of the information is accurate, reliable, and unbiased.

8. Quality means utility, objectivity, and integrity.

9. Reproducibility means capability of being substantially reproduced, subject to an acceptable degree of imprecision, and with respect to analytical results, "capable of being substantially reproduced" means that independent analysis of the original or supporting data using identical methods would generate similar analytic results, subject to an acceptable degree of imprecision or error.

10. Subject to public comment means that DOE has made the information available for comment by members of the public, preliminary to making a final determination, through a notice in the *Federal Register* including, but not limited to, a notice of inquiry, an advance notice of proposed rulemaking, a notice of proposed rulemaking, a notice reopening or extending a comment period due to receipt of new information, a notice of availability of a draft environmental impact statement, or any other *Federal Register* notice that provides an opportunity for comment by members of the public regarding information on which a final adjudicatory determination may be based.

11. Transparent means clear and concise.

12. Utility means the usefulness of the information to its intended users, including the public.

B. Which public disseminations of information are and are not subject to these Guidelines?

These Guidelines apply to any public dissemination of information. The definitions of "information" and "dissemination" establish the scope of the applicability of the guidelines. "Information" means "any communication or representation of knowledge such as facts or data." Consequently, "information" does not include opinions.

"Dissemination" is defined to mean agency initiated or sponsored distribution of information to the public," including, for example, a risk assessment prepared by a DOE Element to inform the agency's formulation of possible regulatory or other action. A DOE Element does not "initiate" the dissemination of information when a Federally employed scientist or Federal grantee or contractor publishes his or her research findings, even if the DOE retains ownership or other intellectual property rights because DOE paid for the research. In such cases, to avoid confusion, the DOE Element should ensure that the researcher includes an appropriate disclaimer that the views are the researcher's and do not necessarily reflect the views of DOE. However, if a DOE Element directs a Federally employed scientist or Federal grantee or contractor to disseminate information and retains authority to review and approve the information before release, then the DOE Element has sponsored the dissemination of the information.

"Dissemination" also does not include the following distributions:
(1) Press releases, including but not limited to fact sheets, press conferences or similar communications in any medium that announce, support the announcement or give public notice of information a DOE Element has disseminated elsewhere;

(2) Any inadvertent or unauthorized disclosure of information intended only for inter-agency and intra-agency communications;

(3) Correspondence with individuals or persons;

(4) Testimony and other submissions to Congress containing information a DOE Element has disseminated elsewhere;

(5) Responses to requests for DOE records under the Freedom of Information Act, the Privacy Act, the Federal Advisory Committee Act or similar laws;

(6) Information in public filings (such as public comments received by DOE in rulemaking proceedings), except where the DOE Element distributes information submitted to it by a third party in a manner that suggests that the DOE Element endorses or adopts the information, or indicates in its distribution that it is using or proposing to use the information to formulate or support a regulation, guidance, or other DOE Element decision or position.

(7) Information contained in subpoenas or documents filed in adjudicative proceedings, including DOE adjudicatory orders, opinions, amicus and other briefs;

(8) Procedural, operational, policy and internal manuals and memoranda prepared for the management and operation of DOE Elements that are not primarily intended for public dissemination;

(9) Archival records (including information made available to the public on a DOE web site to document historical DOE actions); and

(10) Communications limited to government employees or DOE contractors or grantees.

C. What are the Responsibilities of DOE Elements for ensuring quality of information disseminated to the public and responding to requests from members of the public for correction of information?

1. Ensuring Quality

As a guiding principle, DOE Elements should have as a performance goal that information disseminated to the public meets a basic level of quality. The quality of information disseminated by DOE Elements is measured by its utility, objectivity, and integrity. "Objectivity" focuses on whether the disseminated information is being presented in an accurate, clear, complete and unbiased manner and as a matter of substance, is accurate, reliable and unbiased. This includes whether the information is presented in the proper context. Sometimes, in disseminating certain types of information to the public, other information must also be disseminated in order to ensure an accurate, clear, complete, and unbiased presentation.

Also, DOE Elements should (to the extent possible, consistent with security, privacy, intellectual property, trade secrets, and confidentiality protections) identify the sources of the disseminated information and, in a scientific, financial, or statistical context, the supporting data and models, so that the public can assess for itself whether there may be some reason to question the objectivity of the sources. Where feasible, data should have full, accurate, transparent documentation, and possible sources of error affecting data quality should be identified and disclosed to users.

In addition, "objectivity" involves a focus on ensuring accurate, reliable, and unbiased information. In a scientific, financial, or statistical context, the original and supporting data should be generated, and the analytical results developed, using sound statistical and research methods. If the data and analytical results have been subjected to formal, independent, external peer review, the information may generally be presumed to be of acceptable objectivity. However, this presumption is rebuttable based on a persuasive showing by a member of the public seeking correction of information in a particular instance. If DOE Element-sponsored peer review is employed to help satisfy the objectivity standard, the review process employed should meet the general criteria for competent and credible peer review recommended by OMB's Office of Information and Regulatory Affairs to the President's Management Council (http://www.whitehouse.gov/omb/inforeg/oira_review-process.html), namely "that (a) peer reviewers be selected primarily on the basis of necessary technical expertise, (b) peer reviewers be expected to disclose to agencies prior technical/policy positions they may have taken on the issues at hand, (c) peer reviewers be expected to disclose to agencies their sources of personal and institutional funding (private or public sector), and (d) peer reviews be conducted in an open and rigorous manner."

Influential information. If a DOE Element is responsible for disseminating and disseminates influential scientific, financial information, a high degree of transparency of data and methods should be ensured to facilitate the reproducibility of such information by qualified third parties. "Influential" when

used in the context of scientific, financial or statistical information, means information: (1) that is subject to embargo until its dissemination by DOE or a DOE Element disseminating the information because of potential market effects; (2) that is the basis for a DOE action that may result in an annual effect on the economy of $100 million or more; or (3) that is designated by a DOE Element as "influential."

With regard to original and supporting data related thereto, these Guidelines do not require that all disseminated original and supporting data be subjected to the reproducibility requirement applicable to influential information. DOE Elements may identify, in consultation with the relevant scientific and technical communities, those particular types of data that may practicably be subjected to the reproducibility requirement, given ethical, feasibility, confidentiality, privacy, trade secret, security, and intellectual property constraints. It is understood that reproducibility of data is an indication of transparency about research design and methods and thus a replication exercise (*i.e.* a new experiment, test, or sample) should not be required prior to each dissemination. At a minimum, DOE Elements should assure reproducibility for those kinds of original and supporting data according to "commonly accepted scientific, financial, or statistical standards."

With regard to analytic results related thereto, DOE Elements generally should demonstrate sufficient transparency about data and methods that an independent reanalaysis could be undertaken by a qualified member of the public. These transparency standards apply to analysis of data from a single study as well as to analyses that combine information from multiple studies.

Making the data and models publicly available will assist in determining whether analytical results are capable of being substantially reproduced. However, the objectivity standard does not override other compelling interests such as privacy, trade secret, security, intellectual property, and other confidentiality protections.

In situations where public access to data and methods will not occur due to other compelling interests, DOE Elements should apply rigorous robustness checks to analytic results and document what checks were undertaken. DOE Elements should, however, disclose the specific data sources that have been used and the specific quantitative methods and assumptions that have been employed. However, each DOE Element should define the type of robustness checks and the level of detail for documentation thereof, in ways appropriate for it given the nature and multiplicity of issues for which the DOE Element is responsible.

With regard to the dissemination of information containing analyses of risks to human health, safety and the environment, DOE Elements should either adopt or adapt the quality principles applied by Congress to risk information used and disseminated pursuant to the Safe Drinking Water Act Amendments of 1996. DOE Elements responsible for dissemination of vital health, environmental and

medical information should interpret the reproducibility and peer-review standards in a manner appropriate to assuring the timely flow of vital information to medical providers, patients, health agencies, and the public. Information quality standards may be waived temporarily by DOE Elements in urgent situations (*e.g.* imminent threats to public health or homeland security).

"Utility" refers to the usefulness of the information to intended users including the public. In assessing the usefulness of information, DOE Elements need to consider the uses of the information they plan to disseminate not only from their perspective but also from the perpsective of the public. As a result, when transparency of information is relevant for assessing the information's usefulness from the public's perspective, DOE Elements should take care to ensure that transparency has been addressed in its review of the information.

"Integrity" refers to security -- the protection of information from unauthorized access or revision to ensure that information by DOE or DOE Elements is not compromised through corruption or falsification.

Pre-dissemination review procedures. Before disseminating information to members of the public, the originating office of the DOE Element must ensure that the information is consistent with the OMB and DOE guidelines and must determine that the information is of adequate quality for dissemination. If the information is influential financial, scientific, or statistical information, then the DOE Element should provide for higher level review of the program office's conclusions. Each DOE Element should identify for the CIO a high ranking official at the rank of at least a deputy assistant secretary who is responsible for ensuring the accountability of the DOE Element's program offices in reviewing information to be disseminated to members of the public under the OMB and DOE guidelines.

As a matter of good and effective information resources management, DOE Elements may develop and post on their websites supplemental guidelines for the process they will follow for reviewing the quality (including objectivity, utility and integrity) of information before it is disseminated. DOE Elements should treat information quality as integral to every step of development of information, including creation, collection, maintenance, and dissemination. This process will enable every DOE Element to substantiate the quality of the information it has disseminated through documentation or other means appropriate to the information.

Paperwork Reduction Act. It is important that DOE Elements make use of OMB's Paperwork Reduction Act (PRA) clearance process to help improve the quality of information that the DOE Elements collect and disseminate to the public. DOE Elements already are required to demonstrate in their PRA submissions to OMB the "practical utility" of a proposed collection of information the DOE Element plans to disseminate. Additionally, for all proposed collections of information that will be disseminated to the public, DOE Elements should demonstrate in their

PRA clearance submissions to OMB that the proposed collection of information will result in information that will be collected, maintained, and used in a way consistent with the OMB and DOE information quality guidelines.

2. Responding to requests from members of the public

To facilitate public review of information disseminated to the public, these Guidelines provide procedures allowing members of the public to seek and obtain correction of information disseminated to the public that does not comply with the quality provisions of these Guidelines. The procedures, set out in Part IV below, provide separate mechanisms for information set forth or referenced in a DOE or DOE-sponsored document subject to public comment and all other DOE or DOE-sponsored information.

IV. Requests from members of the public for correction of publicly disseminated data.

A. How does a member of the public request correction of publicly disseminated information?

1. Requests from members of the public seeking correction of DOE or DOE-sponsored documents subject to public comment

(A) With respect to information set forth or referenced in a DOE or DOE-sponsored document subject to public comment, a member of the public must request correction within the comment period in a comment that:

(1) Specifically identifies the information in question and the document(s) containing the information;

(2) Explains with specificity the reasons why the information is inconsistent with the applicable quality standards in the OMB or DOE guidelines; and

(3) Presents substitute information, if any, with an explanation showing that such information is consistent with the applicable quality standards in the OMB and DOE guidelines.

(B) With respect to information set forth or referenced in a DOE notice of final rulemaking or a final Environmental Impact Statement (and any related Record of Decision), a member of the public may only file a request for correction of information in the form of a petition for rulemaking under 5 U.S.C. 553(e) or a petition for a supplemental environmental impact statement under 10 CFR Part 1021, whichever is appropriate.

(C) A member of the public must file a request for correction under this paragraph at the address for comments set forth in DOE's notice providing for public comment.

(D) If the request for correction concerns information in or referenced in a document subject to comment at an early stage of the public comment process (e.g., an advance notice of proposed rulemaking), any response prior to publication of the final document is a preliminary response.

(E) A member of the public who files a request for correction under this paragraph has the burden of proof with respect to the necessity for correction as well as with respect to the type of correction requested.

2. Requests from members of the public seeking correction of DOE or DOE-sponsored documents not subject to public comment

(A) With respect to information set forth or referenced in a DOE or DOE-sponsored document that is disseminated or redisseminated on or after October 1, 2002, and is not subject to public comment, a member of the public must request correction by letter to the Office of the Chief Information Officer, Attention: DOE Quality Guidelines, U.S. Department of Energy, Forrestal Building -- Room 8H-089, 1000 Independence Avenue N.W., Washington, D.C. 20585, or via Fax to (202) 586-7996, or by filling out the form provided at the CIO web site: http://cio.doe.gov/informationquality . This form will request the information set forth in paragraph (B) below.

(B) If a member of the public requests correction of DOE or DOE-sponsored information by letter, addressed to the CIO, then the letter must:

(1) Specifically identify the information in question and the document(s) containing the information;

(2) Explain with specificity the reasons why the information is inconsistent with the applicable quality standards in the OMB Guidelines or DOE guidelines; and

(3) Present substitute information, if any, with an explanation showing that such information is consistent with the OMB guidelines and the DOE implementing guidelines.

(C) If a member of the public complains about information set forth or referenced in a DOE or DOE-sponsored document and does not request correction under the OMB or DOE guidelines, then the complaint is not subject to processing as a request for correction under those guidelines.

(D) A member of the public who files a request for correction under this paragraph has the burden of proof with respect to the necessity for correction as well as with respect to the type of correction requested.

B. How does DOE process requests for correction?

(A) *Incomplete requests.* If a request for correction is incomplete, DOE may seek clarification from the person submitting the request or return it without prejudice to resubmission.

(B) *Public notice of a request for correction.* In selected cases, DOE may publish notice of the receipt of a request for correction and may invite public comment.

(C) *Participation by other interested persons.* By letter, DOE may invite or allow other interested persons to comment on a request for correction.

(D) *Initial decisions.* If the request for correction concerns information that does not involve a document subject to public comment, then the originating office

of the DOE Element responsible for dissemination of the information should provide at least an initial response within 60 days (with a copy to the CIO). The response should contain a statement of reasons for the disposition.

(E) *Administrative appeals.* In the event DOE initially denies a request for correction of information not subject to public comment and the person who submitted the request would like additional review, then that person must submit a request for review, including a statement of reasons for modifying or reversing the initial decision, no later than 30 days from the date of that decision. A request for review under this paragraph must be submitted by e-mail to cio.webmaster@hq.doe.gov, or by regular mail to Office of the Chief Information Officer, Attention: DOE Quality Guidelines, U.S. Department of Energy, Forrestal Building -- Room 8H-089, 1000 Independence Avenue N.W., Washington, D.C. 20585, or via Fax to (202) 586-7996. The CIO will direct the request for review to the DOE Element which supervises the originating DOE program office, and the DOE Element, with the concurrence of the Office of General Counsel, should issue a final decision for DOE (with a copy to the CIO) within 60 days from the date that the request for review is received.

(F) Any corrective action will be determined by the nature and timeliness of the information, the magnitude of the error, and the cost of undertaking a correction. DOE Elements are not required to change, or in any way alter, the content or status of information simply based on the receipt of a request for correction. DOE Elements need not respond substantively to frivolous or repetitive requests for correction. Nor do DOE Elements have to respond substantively to requests that concern information not covered by the OMB or DOE Guidelines or from a person whom the information does not affect.

(G) If DOE determines that a request for correction of information not subject to public comment has merit, DOE may respond by correcting the information in question and without issuing a decision explaining the reasons for accepting the request.

(H) If DOE receives multiple requests for correction of information not subject to public comment, DOE may consolidate the requests and respond on a DOE web site, or by notice in the *Federal Register,* or by issuing a correction in similar form and manner as the original information was issued.

V. DOE Reporting Requirements.

On an annual fiscal-year basis, the CIO will report to the Director of OMB concerning requests for correction received under these Guidelines. DOE Elements must designate a reporting official, except as agreed otherwise between the DOE Element and the CIO, for example, where the CIO might compile the data for the DOE Element. Where a DOE Element reporting official has been designated, that official must report to the CIO no later than November 1 every year concerning requests received during the previous fiscal year and their resolutions, including requests with regard to information subject to public comment. The first reports are due November 1, 2003. The CIO will compile the DOE consolidated report and submit it annually to OMB beginning January 1,

2004. DOE Element reports should contain the number of complaints received, nature of complaints (e.g., request for deletion or correction) and how they were resolved (e.g., number corrected, denied, or pending review). The report must also include a compilation of the number of staff-hours devoted to handling and resolving such complaints and preparing reports.